Department of
Environmental Protection
Bureau of Land & Water Quality April 2005
O&M Newsletter

A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons

Another Standard Conditions Article!!

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR

or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

Prompt and complete reporting is essential for all facilities to demonstrate compliance with the various terms and conditions of their permits. When noncompliance does occur, documenting the cause(s) and describing the actions to correct the problem(s) are equally important. The best general advice on any reporting issue is that it is better to err on the side of submitting information not required than to fail to submit reports that are required. If you are not sure, contact your assigned inspector and

he or she will tell you whether they want a particular report and when it should be submitted.

The Planned Changes section (a) requires notification of DEP before making physical changes such as upgrades, new treatment units or elimination of treatment units. It is also simply prudent to get Department agreement on the scope and direction of the project before a lot of time and money are invested. If the changes require permit modification, the permit modification must be issued before changes in the effluent take place. Notification is not required for minor changes that do not significantly increase pollutant loadings or require license changes. However, any new or increased discharge of a pollutant not listed in your permit or in the license application on file with the Department must be reported (this condition refers to condition d(4) which provides a list of toxic pollutants that must be reported). Under subsection 1(a)(i), the new source criteria apply primarily to private licensees such as industrial or commercial facilities adding new processes, and not to POTWs adding new industrial users or sources of pollutant loadings. Pretreatment reporting requirements are described under D(5).

When planned upgrades or maintenance activities could cause noncompliance, in addition to taking steps to prevent or reduce the noncompliance, licensees are expected to notify the Department of their plans well ahead of time. Department staff may be able to provide information or guidance that prevents or reduces the scope or severity of the noncompliance.

The section (c) on transfers applies mainly to private facilities. Transfers are not complete until approved by the Department, and both the transferor and the transferee are jointly liable for any noncompliance at the facility. So, it is in the best interest of the transferor to notify the Department of the transfer to minimize exposure to compliance problems caused by the new owners. The statutes and regulations cited here are the ones that establish application and permit processing requirements.

The Monitoring Reports section (d) points out that all extra tests done using approved EPA methods listed in Federal Regulations (40CFR part 136) or Standard Methods must be reported to the Department. Tests not done by approved or Standard methods (such as use of grabs instead of composites for process control tests) should be recorded in operational logs with appropriate notations.

The compliance schedules section (e) establishes a 14-day period for notifying the Department of compliance or lack of compliance. This applies to situations where actions are required by certain dates, but for which there is no specified report to the Department included with the compliance deadline. It does not apply to submittal of reports that are required by compliance schedules – those are due on the deadline date.

Under the 24-hour reporting heading (f), both 24-hour and 5-day reporting requirements are described. Most licensees are aware of the requirement to make 24-hour and 5-day reports on noncompliance that may endanger health or the environment, or unanticipated bypasses and upsets that cause noncompliance. This condition also requires reporting within 24 hours of violation of a maximum daily discharge limit for which the license includes a 24 hr reporting requirement for that pollutant. This aspect of reporting requirements is probably not as well known,

probably because very few permits include this requirement. Waiver of the 5-day written report requirement is probably most common when the noncompliance happens near the end of a month and would be on the monthly report anyway.

The 24-hour notification should be done by speaking directly to staff on the telephone. Email and fax may be acceptable as long as the message actually gets to a staff person quickly, such as by copying the email or fax to more than one inspector in the appropriate regional office. The clock starts when the licensee becomes aware of the noncompliance. On weekends or for after-hours emergencies, the 24 hour reporting requirement may have to be handled a little differently. If the weekend problem is not severe, i.e. DEP would not need to react to it until the following week, email, voice mail or fax notification is acceptable. If there is a disaster at the treatment plant, or if there will be very serious violations or discharges (large chemical spill, fish kill, etc.), DEP should be notified through the spill response hotline (800-482-0777). The oil & hazardous response staff have a list of BLWQ contacts, including facility inspectors, and will make appropriate notifications.

The last section (h) states a requirement that any time the licensee becomes aware of errors or omissions in previous submittals to the Department, the licensee is required to promptly notify the Department and include the correct information or facts.

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Clarifier Workshop

On Wednesday, May 18, 2005, JETCC will present a class on Optimizing Clarifier Performance and Flow Measurement at the Augusta Sanitary District. The class will be taught by John Esler, a nationally recognized expert in clarifier design and performance improvement .

Producing high quality wastewater effluent depends heavily on an efficient clarifier operation. The Clarifier Performance portion of the workshop will help you:

- *Evaluate the type of clarifier used at a facility*
- *Understand the various means of distributing flow to clarifiers*
- *List and describe the major components of circular, rectangular and square clarifiers*
- *Assess Various options for optimizing clarifier performance*
- *Discussion and tour of clarifiers at this facility*

The workshop will include field exercises on such topics as:

- *Dye testing*
- *Current Measurements*
- *Solids profiling*

The Flow Measurement portion of the workshop will help you:

- *Select the right flume or weir for your application*
- *Properly size weirs and flumes*
- *Verify the calibration of flow meters for open channel and closed pipe flow installations*

John Esler's experience includes over 30 years in general construction, consulting engineering, operator training and technical assistance. He has served as director of New York State-Department of Environmental Conservations' (NYS-DEC) certification, training and technical assistance program and director of O & M on a large international wastewater treatment project..

For more information about this class, contact JETCC at 253-8020

Spring 2005 Exam

The Spring Wastewater Exam will be given in the usual locations on Wednesday, May 11, 2005. Results should be available in 4 to 6 weeks after.. Applications for the Fall exam, which will be given on November 9, 2005 must be postmarked on or before September 23, 2005 or hand delivered to the DEP Augusta Office on September 26, 2005.

For Practice

1. The only backflow prevention device which insures that wastewater and potable water will never be mixed is
   a. A flapper valve
   b. A ball valve
   c. An air gap
   d. a vortex separator

2. A BOD test was run using three dilutions of the same sample. What is the BOD?

Sample Volume	Initial DO	Final DO
3 mL.	8.1 mg/L	5.9 mg/L
5 mL	7.8 mg/L	3.8 mg/L
9 mL	7.4 mg/L	1.2 mg/L

   a. 200 mg/L
   b. 222 mg/L
   c. 237 mg/L
   d. 250 mg/L

3. If the return sludge rate does not change and the influent flow increases with a constant BOD concentration, the MLSS in the aeration basin will most likely…
   a. Decrease
   b. Increase
   c. Remain the same
   d. Depend on the air temperature

4. If an operator has a stock solution of acid that is 10N and he wants a solution of 0.5 N acid, how much acid and distilled water should be mixed to make a liter of proper strength solution?

   a. 200 mL acid + 1000 ml of water
   b. 100 mL of acid + 900 ml of water
   c. 50 ml of acid + 1000 ml of water
   d. 50 mL of acid + 950 ml of water

Approved Training

April 13, 2005 in Topsham ME – Wastewater Treatment: The Fundamentals - Sponsored by WPETC - 207-761-2991 – Approved for 6 hours
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April 14, 2005 in Brewer ME – Lockout/ Tagout & Confined Space Entry - Sponsored by WPETC - 207-761-2991 – Approved for 5 hours
*****
April 21, 2005 in Augusta, ME - Tricks to By-Pass Pumping - Sponsored by JETCC - 207-253-8020 – Approved for 6 hours
*****
April 27, 2005 in Orono, ME - Biological Process Control - Sponsored by JETCC - 207-253-8020 – Approved for 6 hours
*****
April 27, 2005 in Old Town, ME – Tractor-Loader-Backhoe - Sponsored by MRWA - 207-729-6569 – Approved for 5 hours
*****
April 28, 2005 in Caribou, ME – Tractor-Loader-Backhoe - Sponsored by MRWA - 207-729-6569 – Approved for 5 hours
*****
April 28, 2005 in Topsham ME – Math for Wastewater Operators - Sponsored by WPETC - 207-761-2991 – Approved for 5 hours
*****
April 28 & 29, 2005 in Portland - Advanced Activated Sludge - Sponsored by JETCC & NEIWPCC - 207-253-8020 – Approved for 6 hours
*****
May 3, 2005 in North Vassalboro, ME - Corrosion Management in Potable Waters: It's Not Just Water Chemistry - Sponsored by JETCC - 207-253-8020 – Approved for 3 hours
*****
May 3, 2005 in North Vassalboro, ME - Verifying the Water/Wastewater Treatment Processes - Sponsored by JETCC - 207-253-8020 – Approved for 3 hours
*****
May 4, 2005 in Kennebunkport, ME - Ten Best Kept Water & Wastewater Process Management Secrets - Sponsored by JETCC - 207-253-8020 – Approved for 6 hours
*****
May 5, 2005 in Topsham ME – Exam Review for Wastewater Treatment - Sponsored by WPETC - 207-761-2991 – Approved for 5 hours
*****
May 18, 2005 in Augusta, ME - Optimizing Clarifier Performance and Flow Measurement - Sponsored by JETCC - 207-253-8020 – Approved for 8 hours
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Note:
WPETC stands for Wright Pierce Environmental Training Center.
JETCC stands for Joint Environmental Training Coordinating Committee

MRWA stands for Maine Rural Water Association
MWWCA stands for Maine Wastewater Control Association
NEIWPCC stands for New England Interstate Water Pollution Control Commission

Answers to *For Practice:*

1. c. An air-gap is the only acceptable method to prevent cross-connections between wastewater and potable water.
2. b.

Sample Volume	Initial DO	Final DO	BOD
3 mL.	8.1 mg/L	5.9 mg/L	220 mg/l
5 mL	7.8 mg/L	3.8 mg/L	240 mg/L
9 mL	7.4 mg/L	1.2 mg/L	207 mg/L

   All three results are valid. To get the final BOD, average the results giving 222 mg/L

3. a. The MLSS is mass of microorganisms in the aeration tank. If more flow comes into the plant , the plant will receive more more water. If the return sludge rate remains constant, there will be more water per unit of sludge. Thus, the MLSS decreases

4. d. The normality of the final solution is given by (Volume of Acid X Normality of Acid)/Total Volume

   Solving backwards: Volume of acid = (Total Volume X Normality)/Volume of Acid

   Volume = 1000mL X 0.5/10 = 50 mL of acid + 950 mL water = 1 liter 0.5N acid solution